

What is claimed is :

1. A method for measuring multi-segment LED modules, comprising the following steps:

photographing images of the multi-segment LED modules;

5 locating lighting segments of the photographed images of the multi-segment LED modules by an image vector location algorithm; and

analyzing whether the photographed multi-segment LED modules are defective.

10 2. The method of Claim 1, wherein the image vector location algorithm comprises the following steps:

segmenting the photographed images and linking pixels belonging to an individual segment;

clustering segments belonging to an individual multi-segment LED; and

15 locating every segment and obtaining its corresponding coordinate.

3. The method of Claim 2, wherein the photographed images are segmented by a region growing algorithm.

4. The method of Claim 2, wherein the step of clustering segments comprises the following steps:

20 generating a linear regression curve depending on a central point of every segment;

generating a cross point of the linear regression curve and an image boundary of the multi-segment LED modules; and

sorting distances from the central points of all segments to the cross

point, and clustering the segments according to the sorting sequences.

5. The method of Claim 2, wherein the step of locating segments further comprises the following steps:

5 defining a serial number and a central point of every segment of the multi-segment LED modules;

calculating barycenters of multi-segment LEDs according to the central point of every segment after clustering;

finding out a central segment whose central point is the closest to the barycenter of an individual LED;

10 finding out right lower and decimal point segments having a maximal dot product after clustering;

calculating a bias angle of the multi-segment LED modules;

adjusting the coordinate of every segment of the multi-segment LED modules according to the bias angle; and

15 locating residual segments of the multi-segment LED modules according to the maximal dot product.

6. A system for measuring multi-segment LED modules, comprising:

a plurality of multi-segment LED modules;

20 a camera for photographing images of the multi-segment LED modules; and

a computer connected to the camera, the computer locating the position of every segment of the multi-segment LED modules according to an image vector location algorithm and eliminating defective products according to measuring items.

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7. The system of Claim 6, wherein the image vector location algorithm further comprises the following steps:

segmenting the photographed image and linking pixels belonging to an individual segment;

5 clustering segments belonging to an individual multi-segment LED;
and

locating every segment and obtaining its corresponding coordinate.

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